

## bintec R1200wu

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### R1200wu

The bintec 1200wu is a fully equipped, versatile and flexible multi-protocol router with automatic ISDN backup and UMTS/HSDPA option. It was specially developed for high-speed Internet access and can also be used for remote access in small to medium-sized enterprises or in remote offices. Standard features include a 4-port switch and an Ethernet port for WAN access; this router also comes complete with 10 IPSec tunnels including hardware acceleration. Up to 100 additional IPSec tunnels can be added to the system with the purchase of the corresponding license. The second integrated ISDN BRI interface can also be activated optionally with the purchase of a license.



The basic version of R1200wu offers an SIP Application Level Gateway, enabling it to be connected directly to IP telephones in the network or registered with the VoIP provider. The R1200wu automatically controls the firewall, which makes it considerably easier to configure. It has also been conveniently equipped with a DSP slot for use as a VoIP media gateway.

As a wireless router, the bintec R1200wu supports the 802.11a/b/g/n standards with a gross transfer rate of 54 Mbps. The use of UMTS / HSDPA cards via the extension interface enable internet access with up to 1,8 Mbps for data and voice solutions - independent of the location. In addition to WEP encryption, the secure WPA or WPA2 modes for the use of preshared keys or the integration into a Radius server are available to guarantee secure data transmission via the air interface. Access is controlled on the port level via 802.1x. The multi-SSID function makes it possible for build several different user groups, each with their own guidelines. The WDS function (Wireless Distribution System) can be used to create wireless infrastructures for application scenarios in which a wired solution would be too expensive or technically impossible.

The devices can be configured using either the HTTP Configuration Wizard (recommended for inexperienced users) or via an HTML user interface.

## Wireless LAN

| Feature                                   | Description  |
|---|--|
| WLAN Modes                                | IEEE 802.11 Compatibility Mode: 11a Only, 11b Only, 11g Only, Mixed, Mixed-Long Range, Mixed-Short Range   |
| Channel sets                              | according to IEEE 802.11d (country support)  |
| Data rates                                | IEEE802.11 Standards: a,h (5GHz) g,b (2,4 GHz) modulation schemes: 11, 5.5, 2 and 1Mbps (DSSS) 2.4GHz; 54, 48, 36, 24, 18, 12, 9 and 6Mbps (OFDM), 2,4 and 5 GHz |
| TPC                                       | TPC (Transmission Power Control): At 5 GHz, automatic power reduction according to EN301893  |
| DFS                                       | DFS (Dynamic Frequency Selection): At 2,4 and 5GHz, channels are used dynamically depending on occupation.   |
| WDS                                       | Available  |
| WEP/WPA                                   | WEP64 (40 Bit key), WEP128 (104 Bit key), WPA Personal, WPA Enterprise, WPA2 Personal, WPA2 Enterprise   |
| IEEE802.11i Authentication and Encryption | 802.1x/EAP-MD5, 802.1x/EAP-TLS, 802.1x/EAP-TTLS, 802.1x/EAP-PEAP, Key Management, PSK/TKIP Encryption, AES Encryption, 802.1x/EAP                                |
| Broadcast                                 | Broadcast-SSID: Enable/disable.  |
| Multi SSID                                | Up to 16 service sets per radio in AP mode.  |

## Card Bus (UMTS / HSDPA)

| Feature               | Description  |
|-----------------------|--|
| Interface             | Card-Bus expansion slot at the rear panel                                      |
| Operation             | Hot-Plug capability (plug or unplug module without powering down the system)   |
| Bandwidth             | Up to 3.0 Mbps (UMTS / HSDPA)  |
| Architecture          | Full routing functionality, IPSec, VoIP, etc. via policy and interface concept |
| Mobile Radio Provider | No restrictions  |
| Supported Cards       | Option 3G, further in preparation  |

## ISDN Interface

| Feature                       | Description   |
|-------------------------------|---|
| ISDN protocols                | Euro-ISDN and other national ISDN protocols   |
| Dialup and leased lines (BRI) | Leased lines supported: D64S, D64S2, TS02, D64S2Y   |
| B-channel protocols           | Excellent interoperability with other manufacturers (Raw HDLC, CISCO HDLC, X.75)                  |
| PPP, ML-PPP                   | (See Software)  |
| X.31 over CAPI                | X.25 within ISDN B- and D-channel   |
| CAPI                          | CAPI 2.0 with CAPI user concept (password requested for CAPI use)                                 |
| Bit rate adaptation           | V.110 (1,200 up to 38,400 bps), V.120 up to 57,600 kbps (HSCSD) for connection to GSM subscribers |

## Security

| Feature                      | Description   |
|------------------------------|---|
| NAT/PAT                      | Network & Port Address Translation / Stateful Packet Inspection: Isolation of complete network from public access |
| CLID and callback            | Calling Line Identification (CLID), callback  |
| Access lists                 | Filtering of IP packets according to different criteria (source, destination, port and interface)                 |
| Stateful Inspection Firewall | filtering with monitoring and interpretation of the status of the individual connections                          |
| RADIUS                       | Central check of access authorization at a RADIUS server (PPP and Login Authentication)                           |
| TACACS+                      | Support of TACACS a security application that provides centralized validation of users                            |
| Authentication               | PPP mechanisms (see Software)   |
| Content filtering            | 30 day evaluation licence   |
| VLAN                         | Network nodes in different network segments behave like a arbitrary group connected to the same network segment   |
| Encryption for PPP           | MPPE up to 128 bit other up to 168 bit  |
| VPN - IPSec                  | 10 tunnels inclusive, 100 more via separate licenses  |
| VPN - IPSec                  | Powerful encryption up to 256 bits (AES, 3DES, DES, CAST, Blowfish, Twofish)                                      |
| VPN - IPSec                  | Callback: Transmission of dynamic IP address in D or B channel; free-of-charge licence necessary                  |
| VPN-IPSec DPD                | Dead Peer Detection for IPSec tunnel  |
| VPN - PPTP                   | integrated  |
| VPN - PPTP                   | Strong encryption up to 128 bits (MPPE), up to 168 bits (DES/3DES, Blowfish)                                      |
| DynDNS / DynVPN              | Router can still be reached over the Internet in spite of dyn. IP address   |
| IKE for IPSec                | Pre-Shared Keys and X.509 certificate support   |
| X.509                        | X.509 v1/v3 certificates (PKCS#7/8/10, 12, CLRs, SCEP)  |
| QoS for IPSec                | Available   |
| PKI Support for IPSec        | Available   |
| NAT Traversal for IPSec      | Available   |
| IPCOMP                       | IP Compression  |
| IPSec / RADIUS               | Available   |
| IPSec Redesign               | Policy manager and interface concept  |
| L2TP                         | layer 2 tunneling protocol for ATM, Ethernet, PPP; user authentication  |
| GRE                          | V.0 according RFC 2784 for common encapsulation   |
| Hardware Encryption          | factory default: 3DES, AES and RC4  |

## Maintenance and Service

| Feature                        | Description  |
|--------------------------------|--|
| ISDN logging                   | ISDN event & system logging: recording of all relevant connection data, e.g. intrusion attempts                          |
| SNMP                           | Complete management with MIB-II, Enterprise MIB, inclusive SNMP management software for Windows (DIME Tools and Browser) |
| SSH login                      | Secure connections for terminal applications   |
| Local / remote administration  | Complete configuration and maintenance, local and remote, over Ethernet, ISDN Login or serial interface                  |
| Trace / debugging / monitoring | Traces for ISDN B-/D-channel, R-CAPI traces, Ethernet traces, reason for call break, ISDN signaling information          |
| Email alert                    | Available  |
| DHCP                           | Server and client for simplified configuration for TCP/IP  |
| Setup Tool                     | Integrated, menu-based, intuitive setup program, standard for the whole bintec product portfolio                         |
| HTML Setup Tool                | HTML interface accessible through a Java Script enabled browser  |
| HTML Wizard                    | Browser-based configuration assistant  |
| XADMIN                         | Roll out tool for larger router installations (IP+ISDN)  |
| Activity Monitor               | Controls router activities from each LAN PC  |
| Documentation                  | Complete toolset and documentation on CD   |
| Guarantee                      | 2-year manufacturer's guarantee  |

## Software Features

| Feature                     | Description  |
|-----------------------------|--|
| TCP/IP routing              | Routing information updating and distribution, static or dynamic (RIP v1/v2/triggered, RFC 2091), selectable for each interface, ProxyARP, BOOTP/DHCP forwarding                                 |
| Extended IP routing         | Dependent on source/destination port, source IP address, TOS ..., i.e. policy-based routing  |
| X.25 Enhanced               | X.25 over ISDN, XOT, X.25 to TCP Gateway, X.25 PAD, TP0 Bridge   |
| OSPF                        | Static/dynamic updating and distribution of routing information  |
| Bridging                    | Transparent Mode   |
| QoS                         | Quality of Service with DiffServ and shaping: breakdown of IP data traffic into classes with different priorities, optimized queue handling and shaping as per these priorities                  |
| TCP Download Rate Control   | Optimal for VoIP transmission  |
| BRRP                        | Bintec Router Redundancy Protocol, back up a service offered by a single physical router to a LAN (Virtual Router)   |
| IP load balancing           | Bandwidth management   |
| BoD                         | Bandwidth on Demand: Scalable bandwidth to suit data traffic load  |
| AUX backup                  | Backup via GSM, GPRS or analogue modem   |
| PPP                         | Authentication mechanisms (PAP, CHAP, MS-CHAP, MS-CHAP v2), standard PPP, channel bundling over Multilink PPP (ML-PPP), transparent mode, dynamic IP address assignment (server and client mode) |
| PPPoE                       | Point-to-Point Protocol over Ethernet (Client and Server) for high-speed Internet access over xDSL (RFC 2516)  |
| VoIP                        | SIP, Application Level Gateway; VoIP session management, automatic firewall controlling  |
| LAN user - ISDN WAN partner | Unlimited number   |
| Dyn. IP addresses           | Simple Internet access without fixed IP addresses  |
| ISDN accounting             | Call detail recording, number, charging information, ...   |
| IP accounting               | Source, destination, port, interface, packets/bytes counter  |
| Event Scheduler             | Budgets based on data volume or based on time  |
| Short hold                  | Static and dynamic short hold saves connection costs through automatic call clearing   |
| Keep Alive Monitoring       | Saves costs by only allowing a connection to be set up if configurable IP addresses can be reached   |
| STAC                        | Compression for PPP connections, free-of-charge licence necessary  |
| Cost of ownership           | Minimum, e.g. due to free software updates, full remote administration   |

## Hardware Features

| Feature                   | Description   |
|---------------------------|---|
| RISC architecture         | Motorola 8241 RISC processor with 32 MB RAM   |
| Flash ROM                 | 8 MB on board   |
| 4+1-port switch           | 4+1-port autosensing 10/100 Mbps Ethernet switch                                      |
| VoIP DSP-Slot             | Internal slot for 4 channel DSP   |
| WLAN                      | Internal radio modul, 2,4 GHz and 5 GHz Band, 2 external antennas (Antenna Diversity) |
| ISDN                      | 1 x BRI (2 B channels), opt. 2nd BRI via license                                      |
| Console                   | Serial console port: RS 232 C, RJ45, 1,200 bps - 115 kbps                             |
| Power supply              | External power supply 24 V DC   |
| On/off switch             | Available   |
| Status LEDs               | Power, Status, 10 x Ethernet, 8 x Function (ISDN, ADSL, WLAN, ...)                    |
| Housing                   | Metal housing   |
| Card-Bus Slot             | Slot with standard form factor, hot-plug capable                                      |
| Current UMTS Card Support | OPTION GT 3G, OPTION GT 3G+, OPTION Globe Trotter 3G EDGE                             |
| 19-inch                   | Optional: suitable for mounting in 19-inch cabinet via a 19-inch rack-mount kit       |
| Fanless design            | Long lifetime   |
| Dimensions                | Approx. 295 x 45 x 160 mm (W x H x D)   |